

METEOROLOGICAL SUMMARY FOR SOUTHERN SOUTH AMERICA, NOVEMBER, 1926

By Sr. J. BUSTOS NAVARRETE, Director

[Observatorio del Salto, Santiago, Chile]

November had a more active atmospheric circulation, which culminated in the development of great storms over the southern zone of Chile during the closing days of the month.

Between the 1st and 4th a somewhat important depression crossed the far southern part of the continent, causing rains in the south and as far north as the coast of Arauco. Daily precipitation did not exceed 10 mm.

On the 5th the pressure rose, causing an important anticyclonic center over the south, with fall of temperature and general fine weather until the 8th.

On the 9th and 10th a strong depression crossed the far southern region, causing rains as far north as Valdivia and heavy snows in the region of Magallanes.

From the 11th to the 19th atmospheric quiet reigned over the south, the center of high pressure frequently

extending from Chiloe to the island of Huasco. However, during the 16th and 17th electrical storms developed in the interior of Biobio, Malleco, and Arauco Provinces and on Isla Mocha. These storms moved clear across the country.

On the 20th began a period of bad weather in southern Chile. Between the 20th and 23d a depression crossing the far south caused rains as far as Valdivia. Between the 24th and 30th great cyclones followed one another across the far south, causing heavy rain and wind storms which lashed the entire region as far up as Concepcion Province. On the 28th in the early morning the wind velocity reached more than 1,000 m. per minute (37.1 m. p. h.) at Valdivia. Precipitation varied on the average between 10 and 30 mm. * * *—Transl. B. M. V.

BIBLIOGRAPHY

C. FITZHUGH TALMAN, in Charge of Library

RECENT ADDITIONS

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies:

Arnold, Henry H.

Airmen and aircraft; an introduction to aeronautics. New York. [c1926.] x, 216 p. front. (6 port.) illus. plates. diagrs. 22 cm.

Barnes, Howard T.

Engineering features in breaking the Allegheny ice gorge. Conditions prior to the commencement of the work, methods of attack and the results obtained. Montreal. 1926. unpub. illus. 30 $\frac{1}{2}$ cm. (Repr.: Engin. journ., Nov., 1926.)

Cline, Isaac Monroe.

Tropical cyclones, comprising an exhaustive study ... of ... features observed and recorded in sixteen tropical cyclones which have moved in on Gulf and south Atlantic coasts during the twenty-five years, 1900 to 1924, inclusive ... New York. 1926. xii, 13-301 p. incl. tables, diagrs. maps. 22 $\frac{1}{2}$ cm.

Cold weather, your car and its operation. p. 121-132. illus. 26 cm. (Lubrication. v. 12, no. 11, Nov., 1926.)

Covert, Roy N.

Protection of buildings and farm property from lightning. [Washington. 1926.] ii, 33 p. illus. 23 $\frac{1}{2}$ cm. (U. S. Dept. agric. Farmers' bull., no. 1512.)

Dominguez, Ernesto.

Apuntes sobre prevision del tiempo a corto plazo en la Republica Mexicana. Tacubaya. 1924. 18 p. illus. 27 cm.

Dorno, C.

Ausstattung moderner Strahlungsobservatorien. [Davos. 1926.] 13 p. fig. plates. 26 cm. (Sonderab.: Met. Zeit., Heft 9, 1926.)

Great Britain. Meteorological office.

Instructions for meteorological telegraphy. London. 1926. 54 p. plates. 24 cm. (Met'l observer's handbook (M. O. 191). Suppl. no. 1.)

Notes on the meteorological observations made in British colonies and protectorates in 1923, and summarized in the annual reports of Colonial governments. [London. 1926.] 14 p. 33 $\frac{1}{2}$ cm. (M. O. 287.)

Hellmann, G.

Die Entwicklung der meteorologischen Beobachtungen in Deutschland von den ersten Anfängen bis zur Einrichtung staatlicher Beobachtungsnetze. Berlin. 1926. 25 p. 28 cm. (Abhandl. preuss. Akad. Wissensch., Jahrg. 1926. Phys.-math. Kl. Nr. 1.)

Hess, Victor F.

Die elektrische Leitfähigkeit der Atmosphäre und ihre Ursachen. Braunschweig. 1926. viii, 174 p. illus. 22 $\frac{1}{2}$ cm. (Sammlung Vieweg. Tagesfragen aus den Gebieten der Naturwissenschaften und der Technik. Heft 84/85 (Doppelheft.))

Hoffman, Frederick Ludwig.

Windstorm and tornado insurance. 4th ed., rev. and enl. Chicago. 1926. 109 p. illus. (incl. maps.) 22 cm.

Horiguti, Yosiki.

On the typhoon of the Far East. pt. 1. The distribution of the meteorological elements in the Okinawa typhoon. p. 111-162. figs. 26 cm. (Mem. Imp. mar. obs., Kobe, Japan, v. 2, no. 3, Oct., 1926.)

Humphreys, William Jackson.

Fogs and clouds ... Baltimore. 1926. xvii, 104 p. front. plates. ports. 20 $\frac{1}{2}$ cm.

Joint committee on civil aviation of the U. S. Department of commerce and the American engineering council.

Civil aviation; a report. 1st ed. New York. 1926. xvii, 189 p. illus. (maps.) tables. diagrs. 23 $\frac{1}{2}$ cm.

Kamerling, Z.

Grondslagen voor een weervoorspelling op langen termijn. Leiden. n. d. pt. 1. Enkelvoudige perioden van wijziging der weersgesteldheid. 23 p. figs. tables. 26 $\frac{1}{2}$ cm.

Larisch-Moennich, Franz, von.

Sturmsee und Brandung. 5,185 p. illus. plates (part col.) fold. maps (in pocket.) diagrs. 25 $\frac{1}{2}$ cm.

Leeds tercentenary celebrations.

Report of the tercentenary "clean air" committee. July, 1926. Leeds. n. d. 52 p. illus. 18 cm.

Mexico. Servicio meteorologico.

Promedios de precipitacion anuales. (Promedios de 1921 a 1925 inclusive.) 1 sheet. 34 $\frac{1}{2}$ x 43 $\frac{1}{2}$ cm.

Paine, George Porter.

Aerodynamics of the psychrometer. Newark. [c1926.] p. 33-126. figs. plates. 26 $\frac{1}{2}$ cm. (Delaware notes.) [Reprints of five scientific papers, pub. in Annals of the astron. observ., Harvard college, v. 87, pt. 1, 1924.]

Pan-Pacific science congress. 2d, Melbourne and Sydney, 1923.

Proceedings of the Pan-Pacific science congress, Australia, 1923. Melbourne meeting: 13th-22nd August, 1923. Sydney meeting: 23rd August to 3rd September, 1923 ... Melbourne. [1924.] 2 v. illus. fold. plates, maps (part fold.) fold tables. 24 $\frac{1}{2}$ cm.

Rotmistrov, Vl. G.

Das Wesen der Dürre; ihre Ursache und Verhütung. Dresden. 1926. 68 p. illus. fold. tab. diagr. 23 $\frac{1}{2}$ cm.

Schmidt, Wilhelm.

Auswertung der Wiener Sonnenstrahlungsmessungen für praktische Zwecke. 9 p. figs. 22 cm. (Sonderab.: Fortschritte der Landwirtschaft. Heft. 19, Jahrg. 1926.)

Zur Berechnung der räumlichen Verteilung von Rauch und Abgasen in der freien Luft. [Wien.] p. 425-426. fig. 30 $\frac{1}{2}$ cm. (Gesundheits-Ingenieur. 49. Jahrg. 28. Heft. 10. Juli 1926.)

Schmieder, Oscar.

East Bolivian Andes south of the Rio Grande or Guspay. Berkeley. 1926. p. 85-210. illus. plates. 27 $\frac{1}{2}$ cm. (Univ. Cal. Pub. in geog., v. 2, no. 5, Nov. 10, 1926.) [Contains notes on climate.]

- Stone, George E.** Report on the great ice storm in Massachusetts. Boston. n. d. 15 p. 23 cm.
- U. S. Bureau of standards.** Testing of thermometers. 4th ed. Washington. 1926. 18 p. 25 $\frac{1}{2}$ cm. (Circular of the Bureau of standards. no. 8.)
- Upson, Ralph Hazlett.** Free and captive balloons. New York. [c1926.] xiii, 331 p. front. illus. plates. diagrs. 22 cm.
- Warner, Edward Pearson.** Aerostatics. New York. [c1926.] ix, 112 p. diagrs. 22 cm.
- Winslow, C.-E. A.** Atmosphere and its relation to human health and comfort. p. 794-810. 23 cm. (Amer. soc. civil engin., Proc., May, 1925.)
- Winters, S. R., & Dashiell, B. Francis.** Broadcasting of weather maps by radio accomplished. New method of supplying mariners with weather information proves great aid to navigation. p. 791-A-791-B. illus. 30 cm. (Radio news, v. 8, no. 7, Jan., 1927.)
- ### RECENT PAPERS BEARING ON METEOROLOGY
- The following titles have been selected from the contents of the periodicals and serials recently received in the library of the Weather Bureau. The titles selected are of papers and other communications bearing on meteorology and cognate branches of science. This is not a complete index of all the journals from which it has been compiled. It shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau.
- American review of reviews.** New York. v. 75. January, 1927.
- Huntington, Ellsworth.** The high cost of weather. A résumé of the year 1926. p. 38-42.
- American society of heating and ventilating engineers.** Journal. New York. v. 32. April, 1926.
- Bulkeley, Claude A.** A new psychrometric or humidity chart. p. 237-244.
- Annalen der Hydrographie und maritimen Meteorologie.** Berlin. 54. Jahrgang. 1926.
- Hugo Gustav.** Seemännische und aufstiegstechnische Gesichtspunkte für die Errichtung einer aerologischen Station mit Bordaufstiegsbetrieb an der deutschen Küste, unter Berücksichtigung der Erfahrungen der Drachenstation am Bodensee. p. 351-354. (September.)
- Perlewitz, P.** Geschwindigkeit des aufsteigenden Luftstroms im emporquellenden Cumulus. p. 349-350. (September.)
- Arnold-Alabieff.** Über die Schiffahrtsverhältnisse im Finnischen Meerbusen im Dezember und Januar 1925/26 in Verbindung mit der Tätigkeit der Eisbrechen. p. 367-372. (Oktober.)
- Hugo, Gustav.** Das Setzen und Bergen der Drachen an Bord des Dampfboots "Gna" der Drachenstation am Bodensee. p. 366-367. (Oktober.)
- Köppen, W.** Über geschätzte Windstärken und gemessene Windgeschwindigkeiten. p. 362-366. (Oktober.)
- Arkiv för matematik, astronomi och fysik.** Stockholm. Band 19. H. 3. no. 20. 1926.
- Ångström, Anders.** Evaporation and precipitation at various latitudes and the horizontal eddy convectivity of the atmosphere. 12 p.
- Astronomie.** Paris. 40. année. Décembre 1926.
- Azambuja, L. d', & Grenat, H.** Une grande éruption solaire suivie d'un orage magnétique et d'une aurore boréale. p. 489-491.
- Beiträge zur Physik der freien Atmosphäre.** Leipzig. Band 12. Heft 1. 1926.
- Bjerknes, V.** Die atmosphärischen Störungsgleichungen. p. 1-14.
- Götz, F. W. Paul.** Der Jahresgang des Ozongehalts der hohen Atmosphäre. p. 15-22.
- Hergesell, H.** Zur Geschichte der aerologischen Aufstiege von Schiffen aus. p. 42-44.
- Peppler, W.** Zur Aerologie des Castellatus. p. 45-53.
- Reger, J.** Drachenaufstiege von Bord eines Schiffes aus. p. 37-41.
- Stüve, G.** Thermozyklogene. p. 23-36.
- Deutsche Seewarte.** Aus dem Archiv. Hamburg. 43. Jahrgang, nr. 3. 1925.
- Georgii, Walter, & Seilkopf, Heinrich.** Ergebnisse einer flugwissenschaftlichen Forschungsreise nach Columbia (S. A.).
- Franklin institute. Journal.** Philadelphia. v. 203. January, 1927.
- Swann, W. F. G.** An attempt to detect a corpuscular radiation of cosmic origin. p. 11-33.
- Geographical journal.** London. v. 68. December, 1926.
- Latham, D. V.** Kilimanjaro and some observations on the physiology of high altitudes in the tropics. p. 492-505.
- Geographical review.** New York. v. 17. January, 1927.
- Hobbs, William Herbert.** The first Greenland expedition of the University of Michigan. p. 1-35.
- Jefferson, Mark.** The rains and floods of La Libertad, Peru, in 1925. p. 151-152.
- Gesellschaft für Erdkunde zu Berlin.** Zeitschrift. Berlin. 1926. no. 7-8.
- Gripp, K.** Über Frost und Strukturboden auf Spitzbergen. p. 351-354.
- Heating and ventilating magazine.** New York. v. 24. January, 1927.
- Currier, W. S.** Cave dwellings, as a solution of weather troubles, made feasible by modern ventilation. p. 91. [Repr. Trenton (Mo.) Times.]
- Hemel en dampkring.** Den Haag. 24. jaargang. December 1926.
- Everdingen, E. van.** Zeldzame halo-verschijnselen. p. 390-393.
- Nell, Chr. A. C.** In memoriam A. J. Monné. p. 381-384. [Obituary.]
- Over de kromme banen van onweders aan den hemel.** p. 384-390.
- Matériaux pour l'étude des calamités.** Genève. Année 3. Avril-juin 1926.
- Reck, H.** Hochwasserkatastrophen. p. 48-74.
- Meteorological magazine.** London. v. 61. December, 1926.
- G., E.** Early experiments in measuring the upper wind by means of shell-bursts. p. 266-268.
- Johnson, N. K.** The "sticking" of pressure tube anemometers at low wind velocities. p. 264-265.
- Whipple, F. J. W.** The detonating meteor of October 2d, 1926. p. 253-258.
- Meteorological society of Japan.** Journal. Tokyo. v. 4. February, 1926.
- Isimaru, Yukiti.** On the form of firmament, apparent shape of cloud and visual magnitude of the sun and moon. p. 3-11.
- Meteorologische Zeitschrift.** Braunschweig. Band 43. November 1926.
- Geiger, Rudolf.** Das oberbayerische Stationsnetz zur Untersuchung der bodennahen Luftsicht. p. 425-427.
- Gutenberg, B.** Der Aufbau der Atmosphäre. p. 427-430.
- Kassner, C.** Bemerkungen zu F. Baur "Gegen die langfristigen Wetterprognosen." p. 431-432.
- Knoch, K.** Die starke atmosphärische Trübung im Jahre 1926 in Venezuela. p. 421.
- Koschmieder, H.** Theorie der horizontalen Sichtweite. p. 418-420.
- Myrbach, O.** Erwiderung auf die Mitteilung von Frhrn. v. Aufsess, "Vermutliche Mondeinflüsse auf die Luftdruckgestaltung." p. 430-431.
- Pinkhof, M.** Zur Erklärung der komplizierten Halos. p. 411-416.
- Pinkhof, M.** Zur Frage der Erklärung der Lichtsäulen. p. 421-423.
- Sandström, J. W.** Über den Einfluss des Golfstromes auf die Wintertemperatur in Europa. p. 401-411.
- Süring, R.** Walter Budig. p. 417. [Obituary.]
- Szalay-Ójfalussy, Ladislaus von.** Die Blitzschläge in Ungarn. p. 423-425.
- W. Köppens Beziehungen** zur Wiener Zentralanstalt für Meteorologie. p. 417-418.
- Nature.** London. v. 118. 1926.
- Haldane, J. S.** Acclimatisation to high altitudes. p. 702-703. (Nov. 13.)
- Boys, C. V.** Progressive lightning. p. 749-750. (Nov. 20.)
- Whipple, C. S.** The detection of icebergs. p. 750-751. (Nov. 20.)
- Chapman, S.** The aurora borealis as observed from Norway. p. 797-799. (Dec. 4.)
- Gray, J. A.** Properties of high frequency radiation. p. 801-802. (Dec. 4.)
- Vegard, L.** Luminescence from solid nitrogen, and the auroral spectrum. p. 801. (Dec. 4.)
- Phillips, John.** Rainfall interception by plants. p. 837-838. (Dec. 11.)
- Nature.** Paris. 54 année. 1926.
- Roger, E.** Les variations de l'hiver et de l'été dans la région de Paris depuis le milieu du XVIII^e siècle. suppl. p. 141-142. (30 octobre.)
- Bidault de l'Isle, G.** La pluie de sang du 30 octobre 1926. suppl. p. 169. (27 novembre.)